

PPS06 Small High Accuracy Oil Filled Pressure Sensor





FEATURES

- Compact, cost-effective design
- -14.5 -500 psi pressure ranges
- Available in Gauge, Sealed Gauge, and Absolute configurations
- Supports both constant current and constant voltage power supplies
- Constructed entirely from 316L stainless steel for superior corrosion resistance

• Fully isolated design, compatible with a wide range of fluids and gases

•Standard 15mm diameter OEM pressure sensor

DESCRIPTION

The PPS06 is a media-isolated pressure sensor engineered for a wide range of low-pressure applications. This silicon-based transducer is widely integrated into medical, industrial, military, and commercial systems. Its stainless-steel construction and high-temperature components enable reliable operation in elevated temperatures (up to 150°C available upon request).

The PPS06 series incorporates MEMS piezoresistive sensing elements within a stainless-steel housing, offering excellent long-term stability and precision. Its simple, cost-effective design ensures consistent performance and durability for OEM applications. Custom designs are available upon request—please contact us for more information.

APPLICATIONS

- Medical Devices
- Industrial Automation
- Agricultural Equipment
- Chemical Process
- Natural Gas
- •HVAC System
- •Hydraulic system & switches
- •Pressure gauge

Maximum Environmental Ratings

Operating Temperature-40°C to 125°C Storage Temperature Range-40°C to 125°C Proof pressure 1.5x full scale pressure Burst pressure 1.5x full scale pressure

PPS06 Operational Characteristics

$V_{+} = 5V$, $V_{-} = 0V$, Temperature = $30^{\circ}C$						
PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	
Excitation Voltage	V _{EX}	4.75	5.0	9.25	V	
Excitation Current	I _{EX}		1	1.9	mA	
Input Impedance		2.5		5	kΩ	
Output Impedance		3.5		6	kΩ	
Hysteresis			.05	.075	%FS	
Zero Pressure Output (note 1)	V _{os}			±2.0	mVDC	
Linearity (note 2)			±0.15	0.25	%FS, BFSL	
Repeatability			±.05	±.075	%FS	
Full Scale Output (5V Source)		50			mVDC	
Temperature Error (Span/Offset @ 35C)			.75	1	%FS	
Overpressure (note 5)				2x	FS	
Compensated Temperature Range		0		70	С	
Operating Temperature		-40		125	С	

Notes: 1) Measured at zero pressure with 5.00V source. 2) Defined as best straight line 3) Media Temperature 30C 4) Air Temperature 30C 5) 2 times pressure. Burst pressure 3 times pressure rating.

Application Information

Package

The body design is made of stainless steel (SS316L), which allows for easy manufacturability and long-term stability. Automotive grade vibration proof design for engine mount. Viton O-ring used.

Stability

The silicon MEMS media isolated pressure sensor is mounted to a ceramic base and sealed into the SS housing. Proprietary factory calibration and analysis provide the customer with the most stable product possible with this technology.

Pressure port

1/4" -18NPT and 1/8"-18NPT threads are an option found in the APT5X and APT8X series . Other port fittings such as 7/16-20UNF, and $\frac{1}{4}$ " BSP are available for OEM customers.

Media

The pressure port is tolerant to most media including but not limited to oil, air, gas, some corrosive media, and salt water.

Wetted parts

The wetted surfaces are composed of (316SS) stainless steel, or Hastelloy.

Pressure ranges

Standard pressure ranges are 5, 10, 25, 50, 100, 150, 200, and 300 psi in absolute and gage. Custom pressure ranges are available for OEM customers.



Electrical Connections P# Function P1 - IN P2 - OUT P3 NC P4 + IN P5 + OUT P6 - IN



Part Number Configuration

Model	Pressure Range	Pressure Type	Temperature Compensation	Port
PPS06	1 = 1PSI	G = Gauge	1 = Uncompensated	S = Sensor Only (No Port)
		A = Absolute	2 = Compensated	1 = 1/4" NPT
	500 = 500PSI	S = Sealed Gauge		2 = 1/8"NPT
		C = Vacuum		3 = 7/16" UNF
				4 = 9/16" UNF AN
				5 = 1/4" BSPP
				6 = 1/4" BSPT

Ph: (480) 269-1665 sales@PhoenixSensors.com

Notice:

PhoenixSensors LLC reserves the right to make changes to the product contained in this publication. PhoenixSensors LLC assumes no responsibility for the use of any circuits described herein, conveys no license under any patent or other right, and makes no representation that the circuits are free of patent infringement. While the information in this publication has been checked, no responsibility, however, is assumed for inaccuracies.

PhoenixSensors LLC does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of a life-support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications.